

## CLAIMS

What is claimed is:

1           1.    An electrical power supply for a  
2 thermokeratoplasty tip that can provide an indication of an  
3 electrical characteristic of a cornea, comprising:  
4           an electrode pin;  
5           a return pin; and,  
6           a circuit that can provide a test current to said  
7 electrode pin and the cornea, and an indication of the  
8 electrical characteristic of the cornea in response to the  
9 test current flowing through the cornea and said electrode  
10 and return pins.

1           2.    The power supply of claim 1, wherein the  
2 electrical characteristic is a function of a voltage at  
3 said return pin.

1           3.    The power supply of claim 2, wherein the  
2 electrical characteristic is a time rate of change of the  
3 voltage at said return pin.

1        4.    The power supply of claim 1, wherein said circuit  
2 provides a series of radio frequency test pulses to said  
3 electrode pin.

1        5.    The power supply of claim 3, wherein a number of  
2 radio test pulses is less than a number of radio frequency  
3 operating pulses.

1        6.    The power supply of claim 1, wherein said circuit  
2 provides a wet indicator output signal if the electrical  
3 characteristic is equal to or less than a lower threshold  
4 value and provides a dry indicator output signal if the  
5 electrical characteristic is equal to or greater than an  
6 upper threshold value.

1        7.    The power supply of claim 1, wherein said circuit  
2 provides a series of operating radio frequency pulses if  
3 the electrical characteristic is greater than the lower  
4 threshold and less than the upper threshold.

1        8.    The power supply of claim 1, wherein said circuit  
2 varies an amplitude of said operating radio frequency  
3 pulses in accordance with the electrical characteristic.

1        9.    A method for testing an electrical contact between  
2 a thermokeratoplasty electrode, a cornea and a return  
3 element, comprising:

4            transmitting a test current through the electrode, the  
5 cornea and the return element;

6            comparing an electrical characteristic of the cornea to  
7 a threshold value; and,

8            generating an indicator output signal if the electrical  
9 characteristic is equal to or is greater than an absolute  
10 value of the threshold value.

1        10.   The method of claim 9, providing a series of radio  
2 frequency operating pulses if the electrical characteristic  
3 is less than the absolute value of the threshold value.

1        11.   The method of claim 10, varying an amplitude of  
2 the radio frequency operating pulses in accordance with the  
3 electrical characteristic.

1        12. The method of claim 9, wherein the electrical  
2 characteristic is a time rate of change of a voltage of a  
3 return pin.

1        13. The method of claim 9, wherein a wet indicator  
2 output signal is generated if the voltage characteristic is  
3 equal to or less than a lower threshold value, and a dry  
4 indicator output signal is generated if the electrical  
5 characteristic is equal to or greater than a upper  
6 threshold value.

1        14. An electrode that can be inserted into an opening  
2 of a handle, comprising:

3        a beam that a proximal end and a distal end, said  
4 proximal end being adapted to be inserted into the handle  
5 opening and having an anti-rotation feature that inhibits  
6 rotation within the handle opening.

1        15. The electrode of claim 14, wherein said beam has a  
2 tip at said distal end.

1        16. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a key.

1        17. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a flat surface within a circular  
3 shaped proximal end.

1        18. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a square shaped proximal end.

1        19. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a triangular shaped proximal end.

1        20. The electrode of claim 14, wherein said anti-  
2 rotation feature includes an ellipsoidal shaped proximal  
3 end.

1        21. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a cam shaped proximal end.

1        22. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a spline formed within said  
3 proximal end.

1        23. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a pair of beams located within  
3 said proximal end.

1        24. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a rectangular shaped proximal  
3 end.

1        25. The electrode of claim 14, wherein said anti-  
2 rotation feature includes a hexagonal shaped proximal end.

1        26. A probe assembly, comprising:  
2 a sleeve that has an inner channel; and,  
3 an electrode that is threaded within said inner channel  
4 and has a tip which extends from said sleeve.

1        27. The probe assembly of claim 26, wherein said  
2 sleeve is constructed from a dielectric material.

1        28. The probe assembly of claim 26, further comprising  
2 an adhesive that attaches said electrode to said sleeve.

1        29. A probe assembly, comprising:  
2 an arm; and,  
3 a probe that is coupled to said arm, said probe having  
4 an electrode that extends from a probe body.

1        30. The probe assembly of claim 29, wherein said probe  
2 body extends through an inner channel of an arm sleeve.

1        31. The probe assembly of claim 29, wherein said arm  
2 includes a detent ball that is pressed into an outer groove  
3 of said probe body.

1        32. The probe assembly of claim 29, wherein said probe  
2 body includes a stop that engages said arm sleeve.

1        33. The probe assembly of claim 29, wherein said arm  
2 has a male pin that is inserted into a female socket of  
3 said probe.

1        34. The probe assembly of claim 29, further comprising  
2 a probe holder that captures said probe.